Pacific Region

[The following is an edited version of the verbatim transcript of Jim Lima's presentation.]

California was the site of the first offshore oil development in the world, in Summerland, just south of Santa Barbara. These early drilling ventures used piers or causeways extending from shore, rather than drilling platforms. Drilling began in 1896, but the rigs were abandoned by about 1907 because the technology available at the time made offshore oil extraction simply too expensive. Unfortunately, the wells were not properly capped. The state dealt with some of the worst of these in the early 1990s, but some continue to leak.

The state passed a Minerals Leasing Act in 1921 and this spurred a new period of offshore oil development. One result was that some parts of the Southern California coast were thick with oilrigs and access piers. Some of the piers were not removed until the 1990s. In 1929, new development in state waters was prohibited. In the 1940s, however, some onshore production began which tapped state offshore fields using slant drilling. Some of these wells are still active today. In 1955, offshore drilling under state auspices began again, but now modern drilling platforms were employed.

Federal leasing of offshore exploration and drilling rights began in 1965. Several drilling platforms were erected in the Santa Barbara Channel almost immediately. In 1969, however, the event that changed the face of offshore oil development in the entire country took place. This was the massive oil spill caused by a blowout on one of the Santa Barbara Channel platforms. Many environmental and social scientists see the Santa Barbara spill and public reaction to it as a seminal event in the development of the modern environmental movement. In fact, much environmental legislation was enacted in the years just following the spill, including the National Environmental Policy Act, the Endangered Species Act and the Marine Sanctuary and Research and Protection Act. At the very least, the Santa Barbara spill sparked development of the state and federal environmental review procedures that now govern offshore oil and gas development.

The spill also precipitated a moratorium on leasing and development in the Santa Barbara Channel. This was largely lifted by the late 1970s. In 1982, however, a congressional moratorium on leasing and development off the Northern California coast was imposed and in 1990 a presidential moratorium was imposed on leasing and development off the coast of Oregon, Washington and most of California. This tended to concentrate oil and gas development in Southern California, particularly in the Santa Barbara Channel.

In California, the coastal zone is largely under the permitting authority of local government. Local authority generally ends at the tideline. The near-shore area,

which in California goes from the tideline to three nautical miles offshore, is under the control of the state government. The offshore area, the OCS, which goes from 3 to 200 miles offshore, is controlled by the national government. The OCS does not really have a defined outer boundary off California, although it does not generally encounter an international border.

California has a statute similar to the federal NEPA statute. This is the California Environmental Quality Act. This not only mandates environmental review, it also requires mitigating any significant impacts identified in an environmental review. Development on the OCS then, often requires a joint environmental evaluation, involving federal, state and local government.

In summary, when it comes to offshore development in California, the pattern historically has been from the nearshore to farther offshore. We started at the coast line and moved deeper. We also started at one location and moved laterally along the coast, a pattern that still pretty much holds today. Initially offshore development came from the extension of onshore fields. There was an onshore field, so they knew that structure probably extended into the offshore through the surf zone and into the shallow nearshore area where the piers that supported the early drilling operations were built. The ocean along the coast, however, gets very deep, very fast; so, the cost of building causeways out to the oil eventually became prohibitive
.
Except for the initial development in the 1890's, the boom-and-bust model as most social scientists understand it does not apply to California. Our offshore industry really cannot be characterized as boom-and-bust for any number of both economic and political reasons.

One of the things that we find in our studies is that the issues dealing with offshore oil development and the effects of offshore oil development vary between and within counties. Because of the pattern of offshore oil development, the three counties outside of Los Angeles that are dealing with federal offshore development are Ventura, Santa Barbara and San Luis Obispo. This gives us an advantage in doing social and economic studies in that we have a fairly concentrated area to study.

Oil development in California has engendered a fair amount of controversy. It is important to understand that offshore oil development in California, especially when looking at cumulative impacts, is a product of both state and federal development. State development, however, is largely mature and for the most part is in the phase that we call decommissioning. But any chronic cumulative impacts are a product of both state and federal actions.

Since the very beginning, there has been controversy over oil development in California, whether it was private development, which was the first phase, state development, which was largely 1921 through the 1970's, or federal

development. In the early years of oil development, much opposition focused on the effect of piers, rigs, platforms and the other accoutrements of oil exploration and production on the aesthetic environment. Following the 1969 spill attention shifted decisively toward environmental risks, now perceived as more ominous.

Currently most of the development is concentrated along the Santa Barbara Channel and in the Point Arguello area. We also have 36 undeveloped leases in California. While a couple of these units are within the Santa Barbara Channel, many of them are in the Santa Maria Basin, where there is presently very little, if any, development. That is also one of the least-settled areas of the county because of Vandenberg Air Force Base, which is adjacent to the coastline.

Just as oil development in California has moved through several phases, the studies program also has shifted its focus. During the late 1970s and the 1980s, the program focused on collecting information required for environmental impact assessment and studies were largely descriptive. They often included baseline community profiles and data on a host of demographic variables. Another issue that we looked at quite heavily in this period was facility siting. One of the things I have found looking at the Environmental Studies Program is that it does tend to follow many of the issues that are of concern in the overall community. In the late 1970's and 1980's, as a result of the Coastal Zone Management legislation, there was a lot of concern expressed about facility siting. If we are going to build facilities, what kind of facilities should they be? What will the social and economic impacts be? If you are going to build a refinery, what specialties will be needed as far as trade unions? How many people will be working at a certain type of facility? Where do we put facilities, and what will the social and economic impact be of constructing and operating those facilities?

Also in this era we were looking at offshore and onshore archaeology. This is one of the best programs that I have seen in the federal government, and understand I have worked in marine archaeology for both the National Park Service and Minerals Management Service and I am familiar with the Army Corps projects as well as state projects. I believe that the MMS has one of the finest marine archaeology programs in the federal or state governments. I believe that our information is of the highest quality and that our science on this is second to none.

In the mid-1980s and early 1990s, with lease sales in abeyance, attention turned toward community studies. These focused on the effects on communities of ongoing oil development and production. Recent studies span a wide range of topics. They have addressed, for example, variations in the effects of oil development on three different counties, studies of community perceptions and public opinion concerning offshore development, and an ethnographic study of the effect of offshore development on fishing communities in the Santa Barbara Channel and the Santa Maria Basin. We're also looking at the impact on the government. Very often an overlooked aspect of offshore development is the

reaction of local government. Santa Barbara County, for example, created a planning agency, a division within its planning department. At one time, if you count the Air Pollution Control District, the Santa Barbara planning department had almost as many employees as the MMS regional office. Again, this office is a local response to offshore development. California law requires a very in-depth analysis of the environmental impacts of the onshore processing facilities and mitigation of those impacts. So, Santa Barbara put together a department of specialists in order to look at that.

The California Offshore Oil and Gas Energy Resources Study is on its fourth year. This research is considering how existing onshore infrastructure will be able to accommodate different potential offshore development scenarios. Tourism and recreation are very important in the Pacific Region and the studies program has developed a methodology for examining the effects of oil and gas development on tourism and recreation in the coastal zone which has been adopted by other federal agencies. We are also finding in California that we need to look at new forms of decision-making, what is being called consensus decision-making. It has its advantages, but it has several disadvantages as well. It is not an easy task to undertake, as many of our people have found out.

Decommissioning is also an issue that will require attention. The state activity, as I said, is largely mature and its decommissioning is almost complete. The initial federal activity, while it is still ongoing, is beginning to mature and eventually it will have to be decommissioned as well. Most of the decommissioning issues that are being dealt with right now are a result of the decommissioning of state platforms. The public does not make a distinction between state and federal. So the state's decommissioning issues are soon to become our decommissioning issues, whether we want it or not. And this may be a place where collaborative research comes into play.

With the expansion and creation of marine sanctuaries off the Pacific coast, the studies program also will have to give more attention to its relation to offshore oil and gas development.

One of the trends that we also foresee is the continuation of the Coastal Marine Institute efforts. Each region has a cooperative research agreement with a university in its area. In California it is the University California. While the program is managed through the University of California at Santa Barbara, any investigator within the University of California system can submit a proposal to address some of the research needs that we have identified. The University has provided some very good science. It tends to be accepted by the public and it is also scientifically defensible.

As in other regions, the Pacific Region also will soon have to address the changing nature of the oil and gas industry. Many major operators have left the Pacific OCS and are being replaced by independents and second-tier firms.

Questions concerning the sustainability of communities also are becoming more prominent. How does OCS development affect the ability of communities to endure? Standard socioeconomic indicators and demographic data cannot answer such a question, so the program's experience with qualitative and ethnographic methods will have to be brought into play.

Our research program in recent years has been guided by the findings and recommendations of two important reports and a very valuable workshop. In 1989, the National Research Council issued a report called *The Adequacy of Environmental Information for Outer Continental Shelf Oil and Gas Decisions, Florida and California*. This document examined the adequacy of environmental information concerning lease sales off California and Florida. It noted that environmental impacts could occur at all stages of OCS operations, including prelease, exploration, development, production and termination. It also pointed out that all of the stages may be taking place simultaneously. The report critiqued many aspects of the Environmental Studies Program, not just socioeconomic research. With regard to the latter, however, it concluded that standard socioeconomic analysis had not been carried out systematically, often used data that was not current and often used aggregate data that was not applicable to the local level. Also, it stated that studies were not building on previous research. In addition, the report concluded that socioeconomic research was ignoring certain kinds of social and economic impacts, such as community reactions to the possibility of lease sales. These might include land speculation, immigration of workers anticipating new employment opportunities or the response of local government to the possibility of development. Studying these issues, the report noted, would require qualitative research and attention to people's values.

In 1991, the Pacific Region held a socioeconomic research planning workshop, the *Southern California Educational Initiative Socioeconomic Workshop*. Community members, academics and state local and federal government personnel attended, as well as agency staff. The workshop recommended pursuing several activities:

- A thorough, multidisciplinary review of the state of the art in socioeconomic research on OCS development;
- Survey research on the dynamics of public opinion regarding OCS development and public perception of its risks and benefits;
- Media analysis; and,
- Case study research on the impacts of OCS activity in the Santa Barbara Channel region.

The first of these has not yet been addressed. It is, perhaps, something that should be done on a national rather than a regional level. We have, however, engaged in significant work in the latter three areas, with particular emphasis on impact studies in the Santa Barbara Channel region.

Other themes discussed in the workshop included the need to consider methods used to assess impacts on such often-ignored activities as, for example, aquaculture or surfing; the importance of aesthetic impacts; the need to look carefully at MMS decision-making processes, and; the importance of producing agency documents in “plain English” so that they are accessible to non-specialists. We have pursued all these themes. With regard to the latter two, I can say that we are moving toward more collaborative and participatory decision-making and everyone in the agency who works on environmental documents has had “plain English’’ training.

In 1992, the National Research Council issued a second report, *Assessment of the U.S. Outer Continental Shelf Environmental Studies Program, Volume III, Social and Economic Studies.* This document reiterated the need to gather information at all stages of the development process. It also called for paying greater attention to the effects of OCS development on communities, other local users of the ocean and coastal zone (such as tourists and fishers) and scientists. We have addressed and we continue to address all these areas. I think we have done a particularly good job examining effects on communities. The issue of effects on scientists raises interesting questions in the sociology of science. One specific issue, for example, is how OCS development might affect local marine science research programs.

Our research methods have been both qualitative and quantitative. There are some things you can do very well with quantitative analysis, but there are other things that really do require a more qualitative or ethnographic approach, especially in dealing with questions concerning communities. The thing that we have to be sure of, though, is that our methods are rigorous, that they can withstand both scientific scrutiny and public scrutiny. Our Environmental Studies Program in the Pacific has performed as much of a public-education function as it has a social science decision-making function. Many of our studies have been very important in educating the public as well as agency personnel, both inside and outside the region.